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ABSTRACT

An interactive research and development (IR&D) project brings together teachers, university researchers, and staff development specialists as a team to identify, research, and disseminate findings from questions of interest to teachers. Six major features of an interactive IR&D project are: (1) teams having at least one teacher, one researcher, and one staff developer; (2) participative decision making; (3) problem-solving focus; (4) concurrent research and development efforts; (5) sensitivity to the classroom's integrity; and (6) use of IR&D as an intervention strategy. Each member of the team contributes knowledge and skill from his field--teaching, research, or staff development. It is the responsibility of the researcher to translate teacher concerns into research questions, coordinate a review of related research, and share these findings with the other team members. The staff development specialist plans a training program for disseminating the research findings. Steps for implementing an IR&D project include: (1) making initial decisions; (2) assigning an IR&D Project Coordinator; (3) recruiting IR&D participants; (4) training IR&D participants; (5) organizing IR&D teams; and (6) supporting IR&D teams. Findings from an IR&D project conducted at Texas Tech University indicate that teachers' participation in such a project affected their attitudes toward research, skills, and teaching practices. (JD)

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INTERACTIVE RESEARCH AND DEVELOPMENT: ANOTHER ASPECT OF STAFF DEVELOPMENT

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INTERACTIVE RESEARCH AND DEVELOPMENT: ANOTHER ASPECT OF STAFF DEVELOPMENT

The purpose of this paper is to describe the organization, operation, and implementation of an interactive research and development (IR&D) project collaboratively conducted by an institution of higher education and a local education agency. Interactive research and development is a strategy which brings public school teachers, university researchers, and staff development specialists together to identify and research questions of interest to the teachers on the teams and to collaboratively plan a means of disseminating their research findings.

The IR&D model was developed and field-tested by the Far West Laboratory for Educational Research and Development (Tikunoff, Ward & Griffin, 1979). Texas Tech University College of Education adapted this model and implemented an IR&D project in the Fall of 1980.

The Program

Through the Texas Tech College of Education project, six research teams were organized which included a university researcher, a staff development specialists provided by the Tech Teacher Corps project, and from one to three classroom teachers. Teacher participants in the Tech project earned 3 hours graduate credit through an individual research course. Each team identified and researched a question of concern to the teachers on the team and planned a dissemination program for their research findings.

Need for IR&D

A review of the literature related to the use of educational research indicates that most teachers generally do not use research findings and practices to improve their teaching. Among the reasons why teachers do not

use research is that they have judged much of the research to be lacking in practicality and inconsistent with classroom realities. If research findings are ever to be effectively implemented at the classroom level, teachers are going to have to be involved in the research itself.

Goals of an IR&D Project

The primary goal of an IR&D project is to encourage teachers to begin to use research findings and practices in their teaching. Secondary goals are to enable teachers to research a specific question of interest to them and to develop some basic research skills used in education. It is also a goal of an IR&D project to generate useful research findings and dissemination programs which will benefit other teachers. It is hoped that through participation in an IR&D project, teachers will develop more positive attitudes toward educational research and will begin to look to research as a means of solving classroom problems.

Essential features of IR&D

Six major features must be present for a research and development effort to be judged interactive. Generally not all features will exist in an ideal form, but all must be manifested in some way.

1) team composition -- team must consist of at least one teacher, one researcher, and one staff development specialist

2) nature of collaboration -- all three roles working with parity in decision making and assuming equal responsibility to identify, inquire into and resolve the problems/concerns of classroom teachers

3) problem-solving focus -- problems must emerge from the mutual concerns and inquires of the team and, above all, must attend to the teachers problems

4) conducting concurrent R&D -- as the research is being conducted, the team can focus on how the data collection and analysis techniques can be used as training mechanisms; research findings can be incorporated later once they are available

5) maintaining the integrity of the classroom -- IR&D is sensitive to the complexity of the classroom setting and to the extent to which research and development may interfere with these settings; it is the team's goal to select and use data sources, data collection procedures, training procedures, etc. that do not intrude upon the naturalness of the everyday settings in which teaching and learning occur; all research and development activities should be conducted in an ongoing teaching-learning situation without undue interference with the natural flow of classroom events.

6) IR&D as an intervention strategy

people:

original participants--teachers gain a new way of looking at teaching and learning concerns and new skills to use in considering and resolving these concerns; researchers may become aware of new critical research issues and gain credibility with teachers in general; staff developers benefit by getting new content for staff development programs and by having staff development programs planned collaboratively

later participants in resulting development programs-- have the benefit of content developed firsthand by practitioners in real classroom settings, presented through a delivery system that was developed collaboratively

institutions: (the classroom, the school, the school district, and the institution of higher education) through participation in a project that accomodates the mutual and individual concerns of its participants, modifications in teaching, learning and teacher training should result; the strategy proposes to make the schooling experience somehow better for teachers and students by encouraging collaborative, classroom-based research.

Contributions to IR&D of Team Participants

Participant	Contribution
TEACHER	Knowledge and skill in teaching (and learning) within the complex setting of the classroom, thus better assuring validity of the research question. Control of teaching and learning within the classroom setting. Awareness of the effect(s) particular r and d procedures may have upon the classroom, thereby providing validity assurance.
RESEARCHER	Knowledge and skill in scientific inquiry (Note: by this is implied more than technical research skills.) Knowledge and skill in utilizing multiple research paradigms in order to approach best the problem under investigation and attend to the context in which the r and d effort will be conducted. Knowledge and skill in applying multiple research methods, e.g., qualitative as well as quantitative methods. Broad knowledge regarding already available information about teaching and learning.
TRAINER (STAFF DEVELOPER)	Knowledge and skill in transferring/ applying both research outcomes and methods in training programs. Knowledge and skill in adapting outcomes from one setting for use in another e.g., dissemination strategies. Knowledge and skill in developing training processes and products. Broad knowledge of already existing training processes and products.

Tikunoff, W., Ward, B. & Griffin, G. Interactive Research and Development on Teaching Final Report. Far West Laboratory for Educational Research and Development, San Francisco, CA, 1979.

Role Descriptions of Researchers and Staff Developers

Researcher--It is the role of the researcher to listen to the concerns of the teachers and to help translate these concerns into a research question. Once the question has been established, it is the researcher's responsibility to coordinate the review of the related research (possibly utilizing a research assistant) and to facilitate the sharing of these findings among team members.

It is then the researcher's responsibility to involve the team members in developing the design of the study and outlining the time table for the study, the researcher will need to be available to assist teachers with research they are conducting in their classrooms and to answer questions and help solve problems as they arise.

The researcher will also be asked to represent the "research viewpoint as the team plans the training program which will be used to disseminate the research findings. Finally, when the team has completed its research, the researcher will supervise the writing of the final research report. Final submission of the formal research report is the responsibility of the researcher. This report can be in whatever format the researcher is most accustomed to using. Very likely, researchers will choose to submit their research for publication and the format followed for preparing a study for publication will also suffice for the project research report.

It is important to point out that teachers have been told that the requirements of them for this project will be to participate in all team activities and to conduct research in their classrooms in accordance with the study planned and designed by the team. Teachers have been told that they will not be required to write a formal research paper for the course or to do additional outside assignments.

Staff Developer--It is the role of the staff developer to listen to the concerns of the teachers and to try to identify those concerns which are most likely to be of interest to other teachers as well. Since one goal of the project is to develop a training program that will be used to disseminate research findings, it is desirable for the research question to be one that is of interest to teachers other than just those on the team. It is the role of the staff developer to help define the question in such a way that research findings will be relevant to other teachers.

At the same time the researcher is coordinating a review of the related research, the staff developer will coordinate a review of the staff development literature on the subject and will facilitate the sharing of these findings with the team. The staff developer will be expected to represent the "development viewpoint" when working with the team in developing the design of the study.

As the research project progresses, it is the responsibility of the staff developer to involve the team members in planning for the dissemination of the research findings. The staff developer is expected to be familiar with the "best practices" in inservice education and to see that these practices are considered if the dissemination plan includes a training program.

Finally, when the team has completed their research, the staff developer will supervise the writing of the dissemination plan. Final submission of the formal development/dissemination report is the responsibility of the staff developer. This report can be in whatever format the staff developer is most accustomed to using.

Note: In the early phases of the Tech IR&D project, the teams found it helpful for the researchers and staff developers to temporarily disregard their independent role assignments and work together to get the work of

the team underway. Later in the project, the separate roles again emerged and the researchers and staff developers began to assume their specific role responsibilities.

Note: For anyone interested in implementing an IR&D project, attachment I provides six steps which explain important aspects of the project.

Attachment II includes findings from the 1980 project year.

Attachment I

IMPLEMENTING AN IR&D PROJECT

IMPLEMENTING AN IR&D PROJECT

Step 1: Making the Initial Decisions

Before committing to an IR&D project, the university administration and/or faculty need to make some initial decisions related to budget, evaluation of the project, and scheduling. The expenses related to an IR&D project are: compensation for the project coordinator and operating expenses related to the project including training, support services for the teams, and secretarial assistance for the project coordinator. It is probably a good idea to establish a set dollar amount that each team will be allowed to spend during their work in the project. The maximum number of teams that can participate during the first IR&D cycle should be determined at this point. A decision also needs to be made related to compensation and/or release time for researchers and staff developers.

Decision-makers must also determine how the project will be evaluated. Evaluation methods and instruments should be selected early so that the evaluation plan can be formulated for the total project.

Arrangements also need to be made to allow teacher participants to earn graduate course credit for their participation if they so desire. The length of the project also needs to be determined. Duration of the project can vary anywhere from one semester to two years or longer, or the decision can be made to allow each team to decide the time frame best suited to their research questions.

Once these decisions have been made, it is time to set a target implementation date and to begin the search for a project coordinator.

Step 2: Assigning and IR&D Project Coordinator

Coordinating an IR&D project is a major responsibility and cannot be executed on a "spare time" basis. The project coordinator will probably

need to be assigned at least half-time to the project. The IR&D project, like most new programs, will have some very busy periods and some slower periods, so the coordinator needs to be willing to be flexible enough to handle the varying work load. The coordinator needs to be a person who works well with others and who has had experience in collaborative educational program deve-opment and implementation. It is also helpful for the coordinator to be a person who has a sound background in educational research and staff development.

Because IR&D is a new model of educational research, the project coordinator needs to be assigned early enough to have suffiecient time to become knowledgeable about IR&D. If possible, the project coordinator will find it helpful to visit with the project staff of some ongoing IR&D project and to interact with persons who are already working in an IR&D project. It is of primary importance that the project coordinator fully understand the rationale and essential features of IR&D before he/she is expected to recruit other persons into the project.

Step 3: Recruiting IR&D Participants

IR&D participants will be from three constituencies: classroom teachers, university researchers, and staff development personnel. Ideally, staff developers should be persons whose jobs entail the planning and implementing of staff development programs. However, if such persons are not available, very likely there are university faculty members who have expertise in educational professional development who are well-qualified to assume this role on an IR&D team.

Potential researchers and staff developers should be recruited prior to recruiting teacher participants. Very likely, once the researchers and staff developers have been selected, they can assist in recruiting teachers for the project.

difficulty in finding common meeting times and places for the persons involved once the teams are organized.

Step 4: Training IR&D Participants

All participants in the IR&D project should participate in an initial orientation and training program. This initial training program should enable participants to get acquainted with each other, to become familiar with the essential features of IR&D, and to understand the advantages of IR&D and how this model is different from typical educational research and development. Also through this session, coomon interests should be identified to help in the organization of the IR&D teams. The Tech project's initial orientation and training program was conducted during two evening sessions 6-9 p.m. and one all-day session 8:30 a.m. to 4 p.m. One thing that was learned from the Tech IR&D project training is that it is probably better if researcher and staff developer participants do not serve as presentors during the training. The reason for this is because teachers in the project tend to see the presentors as "authority figures" and this perception hinders the "team building" that must take place once the participants are organized into IR&D teams.

Step 5: Organizing IR&D Teams

This phase of the project is one of the most critical as the "match" that is achieved will to a large degree determine how successfully the team will operate. Each IR&D team will be comprised of one to four teachers, one researcher, and one staff developer. The Tech project coordinator relied on two sources of data when assigning participants to IR&D teams. One source of data can be the problem identification questionnaires completed by the participants during the initial orientation and training. Also, since all of the participants will have had the opportunity to interact with one another during the group interaction activity of the training, the coordinator can through informal interviews gain input from the

participants concerning their interests and preferences related to team assignments.

After the participants are assigned to teams, the project coordinator should schedule another session for all participants during which individual teams will begin the process of identifying their research question. After this meeting, members of each IR&D team will determine when they need to meet and when the most convenient meeting time is.

Step 6: Supporting IR&D Teams

Once the IR&D teams have been organized and have begun work, the role of the project coordinator becomes that of supporting the work of the IR&D teams. This support very likely will entail helping the teams run computer searches of related literature, getting materials photocopied, and ordering and purchasing materials the teams need for their work. The coordinator should also schedule and arrange monthly meetings for the researchers and staff developers to share concerns and discuss problems related to their work. The coordinator should continue to oversee the evaluation of the project and provide general assistance where it is needed. The primary goal of the coordinator is to keep the project working smoothly and to keep the communication lines open at all times. Each team should complete a team meeting log each time the team meets. The coordinator should review the team meeting logs in order to monitor the progress of each team and keep a file of each team's logs. The coordinator will also organize a meeting of the entire group at the end of each semester to allow the teams to share their progress and findings with each other. When each team completes their work, the project coordinator should receive a formal research report and a formal development/dissemination report.

Attachment II

IR&D FINDINGS (1980)

IR&D FINDINGS (1980)

1. Teachers who participated in an IR&D project did demonstrate significantly greater changes in concerns about the use of research findings and practices in teaching than those who did not participate in an IR&D project.
2. Teachers who participated in an IR&D project did demonstrate significantly higher research-teaching-development skills than those who did not participate in IR&D project.
3. Teachers who participated in an IR&D project did not demonstrate significantly higher interest in professional development than those who did not participate in an IR&D project.
4. Teachers who participated in an IR&D project did demonstrate a positive attitude about the use of research findings and practices in teaching.